

**WE CLAIM:**

1. A recombinant expression construct encoding a reporter gene operably linked to a promoter from a gene the expression of which is induced by a retinoid, wherein the promoter does not contain a RARE site.
2. A recombinant expression construct according to Claim 1, wherein the reporter gene encodes firefly luciferase, chloramphenicol acetyltransferase, beta-galactosidase, green fluorescent protein, or alkaline phosphatase.
3. A recombinant expression construct according to Claim 1, wherein the retinoid is all-*trans* retinoic acid, fenretinide, 9-*cis* retinoic acid, 13-*cis* retinoic acid, etretinate or retinol.
4. A recombinant expression construct according to Claim 1, wherein the promoter is a promoter from human insulin-like growth factor binding protein-3 (IGFBP-3; SEQ ID NO. 1), secreted cell adhesion protein  $\beta$ IG-H3 (SEQ ID NO. 2), epithelial protein lost in neoplasm (EPLIN; SEQ ID NO. 3), ubiquitin-like protein FAT10 (SEQ ID NO. 4), proteasome activator PA28 subunit  $\alpha$  (PA28 $\alpha$ ; SEQ ID NO.:5), Mac-2 binding protein (Mac-2 BP; SEQ ID NO.:6), Protein C inhibitor (PCI; SEQ ID NO.:7), T cell receptor gamma (SEQ ID NO.:8), retinal oxidase (SEQ ID NO.:9), Bene (SEQ ID NO.:10), HIF-2 $\alpha$ / EPAS-1 (SEQ ID NO.:11) or selectin L (SEQ ID NO.:12).
5. A recombinant expression construct according to Claim 1, wherein the

promoter is a promoter from a cellular gene wherein expression thereof in a mammalian cell is induced by a retinoid and inhibits growth of the cell thereby.

5 6. A recombinant expression construct according to Claim 5, wherein the promoter is a promoter from human insulin-like growth factor binding protein-3 (IGFBP-3; SEQ ID NO. 1), secreted cell adhesion protein  $\beta$ IG-H3 (SEQ ID NO. 2), epithelial protein lost in neoplasm (EPLIN; SEQ ID NO. 3), ubiquitin-like protein FAT10 (SEQ ID NO. 4), or proteasome activator PA28 subunit  $\alpha$  (PA28 $\alpha$ ; SEQ ID NO. 5).

10 7. A recombinant mammalian cell comprising a recombinant expression construct according to claim 1, 2, 3, 4, 5, or 6.

15 8. A method for identifying a compound that induces expression of a retinoid-inducible gene in a mammalian cell, the method comprising the steps of:

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- (a) culturing a recombinant mammalian cell according to claim 7 in the presence and absence of a compound;
  - (b) comparing reporter gene expression in said cell in the presence of the compound with reporter gene expression in said cell in the absence of the compound; and
  - (c) identifying the compound that induces retinoid-induced gene expression if reporter gene expression is higher in the presence of the compound than in the absence of the compound.

9. The method of claim 8, wherein expression of the reporter gene is detected using an immunological reagent.

10. The method of claim 8, wherein expression of the reporter gene is detected by assaying for an activity of the reporter gene product.

11. The method of claim 8, where expression of the reporter gene is detected by hybridization to a complementary nucleic acid.

12. A method for identifying a compound that induces expression of a retinoid-induced gene in a mammalian cell, comprising the steps of:

- (a) culturing the cell in the presence and absence of the compound;
- (b) assaying the cell for changes in expression of at least one cellular gene whose expression is induced by a retinoid wherein the promoter does not contain a RARE site; and
- (c) identifying the compound as an inducer of retinoid-induced gene expression if expression of the cellular genes of subpart (b) is higher in the presence of the compound.

13. The method of claim 13, wherein the cellular gene is insulin-like growth factor binding protein-3 (IGFBP-3; NCBI Accession No. M35878.1), secreted cell adhesion protein  $\beta$ IG-H3 (Accession No. AC004503.1), epithelial protein lost in neoplasm (EPLIN; Accession No. AH009382.1), ubiquitin-like protein FAT10 (Accession No. AL031983), Mac-2 binding protein (Mac-2 BP; Accession No.

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U91729), Protein C inhibitor (PCI; Accession No. AL049839.3), T cell receptor gamma (Accession No. AC006033.2), retinal oxidase (Accession No. AF010260), Bene (Accession No. AP001234.3), HIF-2alpha/EPAS-1 (Accession No. NT\_005065.3), selectin L (Accession No. AL021940.1), or proteasome activator PA28 subunit  $\alpha$  (PA28 $\alpha$ ; Accession No. AL136295.2).

14. The method of claim 12, wherein the cellular gene is a gene wherein expression thereof in a mammalian cell is induced by a retinoid and inhibits growth of the cell thereby.

15. The method of claim 12, wherein the cellular gene is human insulin-like growth factor binding protein-3 (IGFBP-3), secreted cell adhesion protein  $\beta$ IG-H3, epithelial protein lost in neoplasm(EPLIN), ubiquitin-like protein FAT10 or proteasome activator PA28 subunit  $\alpha$  (PA28 $\alpha$ ).

16. The method of claim 12, wherein expression of the cellular gene is detected using an immunological reagent.

17. The method of claim 12, wherein expression of the cellular gene is detected by assaying for an activity of the cellular gene product.

18. The method of claim 12, where expression of the cellular gene is detected by hybridization to a complementary nucleic acid.

19. A method for treating an animal to prevent or ameliorate the effects of cancer, the method comprising the steps of administering to an animal in need thereof a therapeutically-effective dose of a pharmaceutical composition of a compound identified according to the method of claims 8 or 12.

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20. The method of claim 19, wherein ~~the~~ animal is a human.

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